

## REMARKS

Reconsideration of this application, as amended, is respectfully requested.

In the Official Action, the Examiner rejects claims 1 and 22 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,108,118 to Minamoto (hereinafter “Minamoto”). Furthermore, the Examiner rejects claims 2 and 3 under 35 U.S.C. § 103(a) as being unpatentable over Minamoto.

In response, independent claims 1 and 22 have been amended to clarify their distinguishing features.

As recited in claims 1 and 22 of the present application, the movable plate comprises a first portion having a reflective surface and a second portion including an electric element, wherein (a) the reflective-surface forming surface of the first portion has an area smaller than an area of the electric-element forming surface of the second portion, and (b) the reflective-surface forming surface of the first portion is positioned opposite to the electric-element forming surface of the second portion in the direction of the thickness of the movable plate (see Figs. 1 and 2 of the present application).

Features (a) and (b) above contribute to reducing the moment of inertia of the entire movable plate, thus providing an optical deflector with an enhanced driving efficiency while maintaining optical performance. In fact, although Minamoto discloses a structure to arrange a Hall element on the movable plate for accurately detecting a position of the movable plate, it does not disclose or suggest a structure to reduce the moment of inertia of the entire movable plate, as in the present invention. Therefore, the optical deflector of Minamoto suffers from the same deficiencies as the prior art discussed in the background section of the present invention and does not solve a stated objective of the present invention (see page 3, lines 23-26).

Turning now to the prior art, the optical deflector of Minamoto, disclosed in Figs. 2A and 2B, discloses a reflective-surface forming surface (the mirror 106), which is one of the surfaces of the movable plate 101, having the same area as the electric-element forming surface (a part of the elastic member 102), which is the other surface. This is clearly different from feature (a) of claims 1 and 22 discussed above. Therefore, the optical deflector disclosed in Figs. 2A and 2B of Minamoto lacks at least feature (a) of claims 1 and 22.

In the optical deflector disclosed in Figs. 5A and 5B of Minamoto, the movable plate 101 has both the reflective-surface forming surface (the mirror 106) and the electric-element forming surface (the surface of the insulating film 102) on one-side. This is clearly different from feature (b) of claims 1 and 22 discussed above. Therefore, the optical deflector disclosed in Figs. 5A and 5B of Minamoto lack at least feature (b) of claims 1 and 22.

Column 8, lines 5-11 of Minamoto discuss the difference between the structures of Figs. 2A, 2B and the structures of Figs. 5A, 5B. In the structure of Figs. 2A and 2B of Minamoto, a movable plate, both sides of which are polished, must be used, whereas in the structure of Figs. 5A and 5B, a movable plate, of which at least one side is polished can be used. Thus, the structure of Figs. 5A and 5B can be made of a low-priced material as compared to the structure of Figs. 2A and 2B. Therefore, there is no possibility of an optical deflector formed by the combination of Figs. 2A, 2B and Figs. 5A, 5B. That is, Minamoto does not suggest combining the optical deflectors of Figs. 2A, 2B and Figs. 5A, 5B. Additionally, those skilled in the art would not be suggested or motivated to combine the optical deflectors of Figs. 2A, 2B and Figs. 5A, 5B.

Therefore, Minamoto does not disclose or suggest an optical deflector comprising both features (a) and (b) recited in claims 1 and 22. Independent claims 1 and 22 have been amended to clarify feature (a) and to add feature (b). The amendment to claims 1

and 22 are fully supported in the original disclosure, particularly in the Drawings at Figures 1 and 2. Thus, no new matter has been entered into the disclosure by way of the present amendment to claims 1 and 22.

With regard to the rejection of claims 1 and 22 under 35 U.S.C. § 102(b), a mirror rocking member for an optical deflector having the features described above and as recited in amended independent claims 1 and 22, is nowhere disclosed in Minamoto. Since it has been decided that “anticipation requires the presence in a single prior art reference, disclosure of each and every element of the claimed invention, arranged as in the claim,”<sup>1</sup> independent claims 1 and 22 are not anticipated by Minamoto. Accordingly, independent claims 1 and 22 patentably distinguish over Minamoto and are allowable. Consequently, the Examiner is respectfully requested to withdraw the rejection of claims 1 and 22 under 35 U.S.C. § 102(b).

With regard to claims 2 and 3, the reflective-surface forming surface of the first portion can have an elliptical shape (claim 2) or a dodecagonal shape (claim 3). Generally, an optical beam having a circular cross-sectional shape is incident on the reflective-surface forming surface at an angle. Thus, the spot of the optical beam projected on the reflective-surface forming surface generally has an elliptical shape. Therefore, the features of claims 2 and 3, combined with the feature in which most of the area of the reflective-surface forming surface is the reflective surface (claim 1) provides an advantage to enhance driving efficiency while maintaining optical performance. Applicants respectfully submit that the features of claims 2 and 3 (in combination with claim 1) in which such a

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<sup>1</sup> Lindeman Maschinenfabrik GMBH v. American Hoist and Derrick Company, 730 F.2d 1452, 1458; 221 U.S.P.Q. 481, 485 (Fed. Cir., 1984).

multiple effect is obtained was not obvious to a person skilled in the art at the time of filing the present invention.

JP no. 10-62709 (Cited in the Information Disclosure Statement of December 3, 2001) discloses making the entire movable plate an elliptical shape. However, the document does not disclose or suggest the structure of the present invention to reduce the moment of inertia of the entire movable plate (that is, the movable plate comprises a first portion having the reflective surface and a second portion including an electric element, wherein (a) the reflective-surface forming surface of the first portion has an area smaller than an area of the electric-element forming surface of the second portion, and (b) the reflective-surface forming surface of the first portion is positioned opposite to the electric-element forming surface of the second portion in the direction of the thickness of the movable plate). Thus those skilled in the art would not be motivated to combine the teachings of JP no. 10-62709 with the teachings of Minamoto. Therefore, Applicants respectfully submit that there is no motivation or suggestion for combining the Minamoto reference with the knowledge of those skilled in the art at the time of the invention. Thus, Applicants respectfully submit that the rejection of claims 2 and 3 is improper and must be withdrawn.

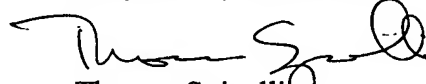
In any event, since independent claim 1 patentably distinguishes over the prior art and is allowable, claims 2 and 3 are at least allowable therewith because they depend from an allowable base claim.

In other words, Independent claim 1, as amended, is not rendered obvious by the cited reference because the Minamoto patent, whether taken alone or in combination with the level of skill of an ordinary artisan, does not teach or suggest an optical deflector having the features described above. Accordingly, claim 1, as amended, patentably distinguishes over the prior art and is allowable. Claims 2 and 3, being dependent upon claim 1 are thus

allowable therewith. Consequently, the Examiner is respectfully requested to withdraw the rejection of claims 2 and 3 under 35 U.S.C. § 103(a).

In view of the above, it is respectfully submitted that this application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicant's attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Thomas Spinelli", with a stylized flourish at the end.

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